DEPARTMENT OF LICENSING

Guidelines for Washington State Building Officials and Design Professionals

Spring 2002

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STATE OF WASHINGTON Department of Licensing

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Forward

Building codes and professional registration laws are meant to work together. State-mandated professional boards protect the public by ensuring that design professionals have suitable education and practical experience, and are tested for competency by each board. Building officials promulgate and enforce building code requirements that protect public health, safety, and welfare. Together, the two safeguard life, health and property through the planning, design, construction and occupancy of safe structures.

The Washington State Building Officials and Design Professional guidelines are designed as a convenient reference for building officials and design professionals regarding state laws and rules related to the Washington State Building Code and the licensed design professions. These professions include: architects, engineers, land surveyors, landscape architects, on-site wastewater designers and geologists. If any portion of these guidelines is determined to conflict with, or contradict, Washington State laws, rules, or the Washington State Building Code, those publications and source documents will prevail.

In addition, these guidelines address the questions most often asked by, or of, building officials. Further information or assistance concerning statutory or administrative requirements may be obtained from the following appropriate offices:

- **Executive Director**
  Board of Registration for Professional Engineers
  and Land Surveyors
  PO Box 9649
  Olympia, Washington 98507-9649
  (360) 664-1565, FAX (360) 664-2551
  Email: engineers@dol.wa.gov

■ **Administrator**

Board of Registration for Architects
Board of Registration for Landscape Architects
Geologist Licensing Board
PO Box 9045
Olympia, Washington 98507-9045
(360) 664-1388, FAX (360) 664-2551
Email: architects@dol.wa.gov

These guidelines were revised May 1, 2002. See the Office of the Code Reviser's web site at www.leg.wa.gov/wsladm/rcw.htm for the most current laws and rules relating to licensed design professionals.

References

Revised Code of Washington

Chap 18.08 RCW ..... Architects

Chap 18.43 RCW ..... Engineers and Land Surveyors

Chap 18.96 RCW ..... Landscape Architects

Chap 18.210 RCW ..... On-Site Wastewater Treatment System Designers

Chap 18.220 RCW ..... Geologists

Chap 19.27 RCW ..... State Building Code

Chap 39.80 RCW ..... Contracts for Architectural and Engineering Services

Chap 58.09 RCW ..... Surveys – Recording

Washington Administrative Code

Chap 51-16 WAC ..... State Building Code

Chap 51-40 WAC ..... State Building Code, 1997 Addition

Title 196 WAC ..... Engineers/Land Surveyors and On-Site Wastewater Treatment System Designers

Chap 308-12 WAC ..... Architects

Chap 308-13 WAC ..... Landscape Architects

Chap 308-15 WAC ..... Geologists

Chap 332-130 WAC .... Surveying Standards

3 Professional Certification of Documents

Architects, engineers, land surveyors, landscape architects, on-site wastewater designers and geologists are, and shall be, responsible for their professional design services. The public, as well as building officials, rely on their professional expertise. Therefore, the responsible design professional must stamp and sign all required Submittal Documents.

Following is a list of professions, followed by the applicable law and rules relating to document stamping.

Architects:
RCW 18.08.420(7)
RCW 18.08.440(5)
WAC 308-12-081

Engineers and Land Surveyors:
RCW 18.43.070
WAC 196-23-010 & 020

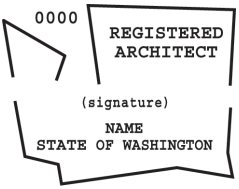
Landscape Architects:
RCW 18.96.150 & 160

On-site Wastewater Treatment System Designers:
RCW 18.210.130
WAC 196-33

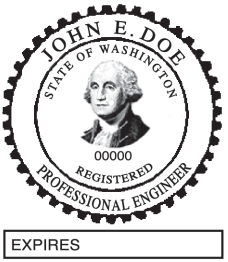
Geologists, including specialties:
RCW 18.220.090
WAC 308-15-070 & 075

While the laws for these professions may have conditions that are unique to each profession, city and county governments may impose conditions that limit the scope of practice in any of these professions, provided that such conditions are not contrary to the terms within each licensing law.

Approved Professional Stamps

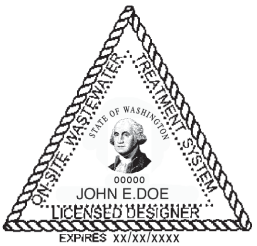


Sample Architect Stamp
WAC 308-12-081



Sample Engineer Stamp
WAC 196-23-010 & 020

Sample Land Surveyor Stamp
WAC 196-23-010 & 020



Sample On-Site Wastewater Designer Stamp
WAC 196-33-400

Approved Professional Stamps

Sample Landscape Architect Stamp
RCW 18.96.150

Sample Geologist Stamp
WAC 308-15-070

Sample Engineering Geologist Stamp
WAC 308-15-070

Sample Hydrogeologist Stamp
WAC 308-15-070

Washington State Building Code

The following are references from the Washington State Building Code as adopted by Section 106.3, Application for Permit.

Section 106.3.2 Submittal Documents

Plans, specifications, engineering calculations, diagrams, soil investigation reports, special inspection and structural observation programs and other data shall constitute the submittal documents and shall be submitted in one or more sets with each application for a permit. When the plans are not prepared by an architect or engineer, the building official may require the applicant submitting such plans or other data to demonstrate that state law does not require that the plans be prepared by a licensed architect or engineer. The building official may require plans, computations and specifications to be prepared and designed by an engineer or architect licensed by the state even if not required by state law.

Exception: The building official may waive the submission of plans, calculations, construction inspection requirements and other data if it is found that the nature of the work applied for is such that reviewing of plans is not necessary to obtain compliance with this code.

Section 106.3.3 Information on plans and specifications

Plans and specifications shall be drawn to scale upon substantial paper or cloth and shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code and all relevant laws, ordinances, rules and regulations.

With the exception of Group R, Group U and Division 3 Occupancies, plans for buildings shall indicate how required structural and fire-resistive integrity will be maintained where

penetrations will be made for electrical, mechanical, plumbing and communication conduits, pipes and similar systems.

Section 106.3.4.1 General

When it is required that documents be prepared by an architect or engineer, the building official may require the owner to engage and designate on the building permit application an architect or engineer who shall act as the architect or engineer of record. If the circumstances require, the owner may designate a substitute architect or engineer of record who shall perform all of the duties required of the original architect or engineer of record. The owner shall notify the building official in writing if the architect or engineer of record is changed or is unable to continue to perform the duties.

The architect or engineer of record shall be responsible for reviewing and coordinating all submittal documents prepared by others, including deferred submittal items, for compatibility with the design of the building.

Section 106.3.5 Inspection and observation program

When special inspection is required by Section 1701, the architect or engineer of record shall prepare an inspection program that shall be submitted to the building official for approval prior to issuance of the building permit. The inspection program shall designate the portions of the work that require special inspection and the name or names of the individuals or firms who are to perform the special inspections, and indicate the duties of the special inspectors. The special inspector may be employed by the owner, the engineer or architect of record, or an agent of the owner, but not by the contractor or any other person responsible for the work.

When structural observation is required by Section 1702, the inspection program shall name the individuals or firms who are to perform structural observation and describe the stages of construction at which structural observation is to occur.

The inspection program shall include samples of inspection reports and provide time limits for submission of reports.

Architecture

Definition

The Washington statute (RCW 18.08.310) defines the practice of architecture as follows:

"The rendering of services in connection with the art and science of building design for construction of any structure or grouping of structures and the use of space within and surrounding the structures or the design for construction of alterations or additions to the structures, including but not specifically limited to schematic design, design development, preparation of construction contract documents, and administration of the construction contract."

Exempt Services and Exempt Structures

Pursuant to RCW 18.08.410, nothing in this law shall affect or prevent:

1. The practice of naval architecture, landscape architecture, engineering, space planning, interior design, or any legally recognized profession or trade by persons not registered as architects.

2. Drafters, clerks, project managers, superintendents, and other employees of architects, engineers, naval architects, or landscape architects, from acting under the instruction, control, or supervision of their employers.

3. The construction, alteration or supervision of construction of buildings or structures by contractors or the preparation of shop drawings in connection therewith.

4. Owners or contractors engaging of persons who are not architects to observe and supervise construction of a project.

5. Any person from executing design work including preparation of construction contract documents and administration of the construction contract for the erection, enlargement, repair, or alteration of a structure or any appurtenance to a structure, if the structure is to be used for a residential building of up to and including four dwelling units or a farm building or is a structure used in connection with or auxiliary to such residential building or farm building such as a garage, barn, shed, or shelter for animals or machinery.

6. Any person from doing design work including preparing construction contract documents and administering the contract for construction, erection, enlargement, alteration, or repairs of or to a non-residential or non-farm building of any occupancy up to four thousand square feet of construction.

7. Design-build construction by registered general contractors if the structural design services are performed by a registered engineer.

8. Any person from designing buildings or other design work for any structure prior to the time of filing for a building permit.

9. Any person from designing buildings or doing other design work for structures larger than those exempted under 5 and 6 above if the plans, which may include such design work, are sealed by a registered engineer or architect.

The Architect

This section describes the general areas of responsibility for architects. It is not all-inclusive, but is meant to offer general guidance on the practice of architecture.

A practicing architect is a person who has a valid license issued by the state within which he or she intentionally assumes responsibility for providing professional services including, but not limited to, safeguarding the health, safety and property and promoting the public's welfare for the

enhancement of both the natural and built environment. These enhancements shall be functional, aesthetically pleasing, sustainable and cost effective. The result of the architect's professional service shall contribute to the physical, sociocultural, and emotional well being of the public.

Examples of subjects architects typically address include:

1. Site Layout: comprehensive plans, land use laws, grading, landscaping, building layout, barrier-free access, parking, and arterial access.

2. Building Classification and Intended Use: occupancy, type of construction, and occupant load.

3. Building Circulation and Egress: corridors, travel distances, exits and exit widths, and stairways.

4. Building Structural Systems: gravity and lateral forces (wind and seismic forces).

5. Fire Safety Considerations:
   a. Use and storage of hazardous materials (e.g., toxics, flammables, corrosives)
   b. Fire ratings, fire walls, separations, requirements for sprinklers, fire alarms, smoke control, penetration control, product and material specifications, and damper types and locations

6. Interior Space Planning.

7. Interior and Exterior Finish Materials, and Wall/Floor Construction Systems for durability, water tightness, aesthetics, and fire ratings.

8. Energy/Ventilation and Indoor Air Quality, including environmental impacts and compliance with regulations:
   a. sound attenuation
   b. energy conservation
   c. solar energy systems
   d. vapor barriers
   e. heating and cooling systems

f. indoor air pollutants

9. Accessibility for Persons with Disabilities (in compliance with Washington state law, Chapter 11, Washington Amendments to UBC, Chapter 51.40)*.

10. Aesthetically Pleasing and Contextually Appropriate Overall Design.

11. Project Coordination.

** Chapter 51-40 WAC, Chapter 51-21 WAC, and "Housing and Building Accessibility: The Law in Washington - 1992, A Comparison."*

Engineering

Definition

Washington statute (RCW 18.43.020(5)) defines the practice of engineering as follows:

"Any professional service or creative work requiring engineering education, training, and experience and the application of special knowledge of the mathematical, physical, and engineering sciences to such professional services or creative work as consultation, investigation, evaluation, planning, design and supervision of construction for the purpose of assuring compliance with specifications and design, in connection with any public or private utilities, structures, buildings, machines, equipment, processes, works, or projects."

In addition, "A person shall be construed to practice or offer to practice engineering, within the meaning and intent of this chapter who practices any branch of the profession of engineering; or who, by verbal claim, sign, advertisement, letterhead, card, or in any other way represents himself or herself to be a professional engineer, or through the use of some other title implies that he or she is a professional engineer; or who holds himself or herself out as able to perform, or who does perform, any engineering service or work or any other professional service designated by the practitioner or recognized by educational authorities as engineering."

A 1962 opinion from the Office of the Attorney General states that a professional engineer may practice in any discipline of engineering in which the engineer is competent. Competence can be achieved through experience and post-examination education. Because of experience gained after obtaining a license, the original discipline of engineering shown on a license may not be the only discipline in which the engineer is competent to practice.

The Engineer

In Washington State, engineers may obtain a certificate of registration in one or more of the following disciplines:

Agricultural	Manufacturing
Civil	Mechanical
Chemical	Metallurgical
Control Systems	Mining
Electrical	Naval Architecture/Marine Engineering
Environmental	Nuclear
Fire Protection	Petroleum
Forest	Structural*
Industrial	

**Structural Engineering is a specialty discipline that requires unique experience and examination in addition to those mandated in any of the other disciplines of engineering. To be licensed in structural engineering, an individual must pass a rigorous examination that tests the individual's knowledge of structural forces such as seismic, wind loads and snow loads.*

Here are some examples that may apply to the practice of engineering or responsibility of professional engineers. The descriptions provide general guidance, and are not considered to be all-inclusive.

1. Overall Project Management: construction management and inspection; planning; application of federal, state and local codes; and design standards.

2. Structural Systems: seismic design and analysis; foundations; soil-structure interaction; connections; beam sizing; horizontal/vertical loading and forces; load and stress analysis; truss design; and failure analysis.

3. Electrical Systems: Power generation distribution and load use requirements; instrumentation; lighting protection and grounding; communication systems; and electronic devices.

4. Mechanical Systems: Machines; dynamics; finite element analysis; fuels; boilers; heating/ventilation and air

conditioning control systems; fluid distribution; energy analysis; air circulation; heat transfer; venting; fire protection systems; and acoustics.

5. Civil Systems: Site design; grading and drainage; soil analysis; wastewater treatment; ground water and wells; earth retaining structures; traffic analysis; road and utility design; water treatment; storm water runoff; erosion control; and structures.

6. Fire Protection Systems: Fire suppression using water and non-water systems; fire detection and alarms; fire prevention; and water supply and risk analysis.

7. Environmental Systems: Water system planning, development and operation; hazardous wastes; air quality; pollution control; natural and ground water sources; and public and occupational health and risk assessment.

8. Miscellaneous: System operations; tools; quality assurance; safety; manufacturing processes; thermodynamics; conservation systems; materials selection; and project quality control.

7 Land Surveying

Definition

The Washington statute (RCW 18.43.020) defines the practice of land surveying as:

"Assuming responsible charge of the surveying of land for the establishment of corners, lines, boundaries, and monuments, the laying out and subdivision of land, the defining and locating of corners, lines, boundaries and monuments of land after they have been established, the survey of land areas for the purpose of determining the topography thereof, the making of topographical delineations and the preparing of maps and accurate records thereof, when the proper performance of such services requires technical knowledge and skill."

The Land Surveyor

Here are some examples of general areas of responsibility for professional land surveyors. The descriptions are not all-inclusive, but offer general guidance on the practice of land surveying.

1. Establishment, reestablishment and recovery of land boundaries, monuments and corners.

2. The subdivision of land into lots, parcels or tracts by the determination and location of new corners, lines and monuments according to local and state subdivision codes.

3. The establishment and measurement of the special areas that define a condominium, including parcel boundaries, building location, building elevations and common areas.

4. Horizontal and vertical measurement, analysis and adjustment.

5. Topographic measurement for the creation of a topographic (contour) map that illustrates slope, terrain, geographical features, structures, improvement, and boundary lines.

6. Writing, reviewing, researching, editing and analyzing land boundary legal descriptions.

7. Geodetic surveys, aquatic land surveys and hydrographic surveys.

Research of written, physical and parole evidence related to the interpretation of land descriptions and boundary locations.

8 Landscape Architecture

Definitions

The Washington statute (RCW 18.96.030) defines the practice of landscape architecture as follows:

"Landscape Architect means a person who engages in the practice of landscape architecture as hereinafter defined. A person practices landscape architecture within the meaning and intent of the chapter who performs for hire professional services such as consultations, investigations, reconnaissance, research, planning, design or teaching supervision in connection with the development of land areas where, and to the extent that, the dominant purpose of such services is the preservation, enhancement, or determination of proper land uses, natural land features, ground cover and planting, naturalistic and aesthetic values, the settings and approaches to structures or other improvements, or natural drainage and erosion control. This practice shall include the location, design, and arrangement of such tangible objects as pools, walls, steps, trellises, canopies, and other non-inhabitable structures, and such features as are incidental and necessary to the purposes outlined herein. It involves the design and arrangement of landforms and the development of outdoor space including, but not limited to, the design of public parks, playgrounds, cemeteries, home and school grounds, and the development of industrial and recreational sites."

Exempt Services

State law prohibits the use of the title "Landscape Architect" by persons who are not licensed by the State. However, the performance of services listed in statute are not restricted and may be performed by unlicensed persons.

The Landscape Architect

A practicing landscape architect has a valid license issued by the state.

The practice of landscape architecture includes: consultation, investigation, reconnaissance, research, planning, design, teaching or construction observation in connection with the development of land areas where, and to the extent that, the dominant purpose of such services includes the preservation, enhancement and mitigation of natural land features such as vegetation, wetlands, land forms, natural drainage courses, lakes, views and aesthetic values.

The practice also includes the planning and design of pedestrian, bicycle, equestrian and vehicular circulation, outdoor spaces including, but not limited to: parks, playgrounds, cemeteries, commercial and industrial sites and multifamily and single family residences. Design elements include such tangible objects such as decks, pools, walls, rockeries, steps, trellises, canopies, walks, trails, accent lighting, irrigation systems and decorative paving.

Here are some examples of areas of responsibility for landscape architects. The descriptions are not all-inclusive, but offer general guidance on the practice of landscape architecture.

1. Planning:
    a. Site Analysis
    b. Visual Assessment
    c. Environmental Assessment
    d. Recreation Assessment
    e. Vegetation Management
    f. Urban and Town
    g. Regional
    h. Parks and recreational facilities
    i. Land development
    j. Historic preservation and reclamation

2. Design:
    a. Site layout
    b. Grading
    c. Drainage
    d. Planting
    e. Irrigation
    f. Pedestrian/bicycle/equestrian/vehicular circulation
    g. Site furniture

h. Recreational facilities
i. Wetland and wildlife habitat mitigation/restoration
j. Soil stabilization
k. Bio-filtration

3. Construction:
   Site construction management and administration

Geology

Definitions

Washington statute RCW 18.220.010(11) defines the practice of geology as follows:

"Performance of geological service or work including but not limited to collection of geological data, consultation, investigation, evaluation, interpreting, planning, geological mapping, or inspection relating to a service or work that applies to geology, and the responsible supervision thereof, the performance of which is related to public welfare or the safeguarding of life, health, property, and the environment, except as otherwise specifically provided by this chapter."

Exemptions
Washington statute 18.220 recognizes some exemptions to geologist licensing laws, which include:

- Geologists not in responsible charge who work under the direct supervision of licensed geologists
- Federal employees
- Geologists exploring for energy and mineral resources
- Geologists performing research
- Geology teachers
- Engineers or other licensed professionals performing geological work related to their practice

The Geologist

"Geologist means a person who, by reason of his or her knowledge of geology, mathematics, the environment, and the supporting physical and life sciences, acquired by education and practical experience, has met the qualifications established under this chapter, and has been issued a certificate of licensing as a geologist by the board."

The legislature established two specialties in geology for licensure: engineering geologist and hydrogeologist. State law

requires anyone offering services to the public claiming to be an Engineering Geologist or a Hydrogeologist to have a specialist license. Most geologic services related to buildings fall within the realm of the two geologist specialties.

The Engineering Geologist

A practicing Engineering Geologist specializes in evaluating geologic site characteristics to determine the responses of geologic processes and materials to development activities, such as removal of vegetation; construction activities such as earthwork; applying loads in foundations and embankments; use of earth materials in construction; and modifying ground water flow. Engineering geologists work in all project phases from planning through location, design construction, and maintenance.

Here are some examples of building-related studies normally conducted by an Engineering Geologist:

Pre-Construction

1. Evaluate geologically hazardous conditions (e.g., slope instability, severe erosion, and susceptibility to seismic shaking);

2. Determine likely impacts to structures and facilities from geologic processes;

3. Determine likely impacts on geologic processes and related resources (e.g., water quality and fish habitat) from development activities; and

4. Evaluate soil and rock mass strength characteristics for design of cuts, fill embankments, tunnels, foundations for structures, and drainage facilities.

Construction

1. Monitor construction activities such as earthwork, foundation and drainage installation, to verify that construction is completed in accordance with design recommendations

2. Observe site characteristics encountered during construction to verify that no adverse changes have occurred

Post-Construction

1. Monitor geologic processes following construction to verify that no adverse changes have occurred

2. Provide consultation related to maintenance of facilities

The Hydrogeologist

A practicing hydrogeologist specializes in the study and analysis of ground water and other fluids as they move within the geologic environment. This work includes ground water well design, construction supervision, and testing; remediation of soil and ground water at contaminated sites; and impact analysis of proposed man made structures on the environment as they may relate to water.

Here are some examples of building-related studies normally conducted by a hydrogeologist:

Pre-construction

1. Characterize, analyze or model the hydrogeologic environment

2. Evaluate the availability of ground water resources for potable and other uses

3. Site and design municipal wells or wells for individual sites

4. Design of dewatering facilities

5. Evaluate local issues such as ground water flooding

Construction

1. Supervise well construction

2. Monitor installation of dewatering systems

3. Manage contaminants encountered during construction

Post-Construction

1. Monitor water resource uses to verify that drawdowns are as predicted

2. Monitor cleanup of contaminants in the ground water environment

3. Monitor the effectiveness of dewatering systems

10 On-Site Wastewater Design

Definition

Washington state law defines on-site wastewater treatment systems and designs as:

Systems: RCW 18.210.010(7) "An integrated system of components that: convey, store, treat and/or provide subsurface soil treatment and disposal of wastewater effluent on the property where it originates or on adjacent or other property and includes piping, treatment devices, other accessories, and soil underlying the disposal component of the initial and reserve areas, for on-site wastewater treatment under 3,500 gallons per day when not connected to a public sewer."

Designs: RCW 18.210.010(8) "On-site wastewater design means the development of plans, details, specifications, instructions, or inspections by applications of specialized knowledge in analysis of soils, on-site wastewater treatment systems, disposal methods, and technologies to create an integrated system of collection, transport, distribution, treatment, and disposal of on-site wastewater."

Here are some examples of activities that on-site wastewater designers typically perform for new construction of a system or evaluation of an existing on-site disposal system:

1. Site Evaluation:
    a. Identify and evaluate existing site and system conditions
    b. Verify potable water source
    c. Verify property dimensions from records
    d. Evaluate design site topography
    e. Locate utilities
    f. Identify surface waters, ground waters and assess drainage

2. Evaluation of Soil:
    a. Complete soil logs and sampling
    b. Determine soil classifications
    c. Determine impervious layers
    d. Identify and locate fill areas
    e. Determine depth of seasonal water table

3. Design:
    a. Specify type of disposal system
    b. Specify, as needed, system components
    c. Specify, as needed, system operational parameters
    d. Determine dynamic head pressure requirements

4. Construction Management:
    a. Observe construction and installation
    b. Verify designed disposal site preparation
    c. Verify designed component construction and materials
    d. Report on inconsistencies
    e. Perform post-construction inspection
    f. Prepare detailed as-built of installation
    g. Perform operational testing

Exemptions to State Law

Washington state law (RCW 18.210.150) exempts licensed professional engineers, as provided in chapter 18.43 RCW, if the professional engineer performs the design work in accordance with this chapter and rules adopted under this chapter. It also exempts an employee or subordinate of a person licensed under Chapter 18.43 RCW as a professional engineer, or a person licensed under this chapter, if the work is performed under the direct supervision of the engineer or licensee and does not include final design decisions.

Questions & Answers

Architect

1. *I have a set of plans for a non-exempt structure that is stamped and signed by an architect registered in a state other than Washington. Does the plan submittal meet the requirements in Washington?*

   No. If the designer is not registered by the Washington Board of Registration for Architects, he or she does not have the authority to practice architecture in Washington.

2. *Can a Washington State-registered architect "over-seal" plans prepared and stamped by out-of-state registered professionals for submittal in Washington?*

   Yes, the plans can be stamped if reviewed by an architect in a manner consistent with the definition of "review" as outlined in WAC 308-12-115(8). In other words, the architect must have been involved in a continuous process of examining, evaluating and directing the plans throughout their development, including the ability to control the final product. The architect is then responsible to the same extent as if he or she prepared the documents.

3. *Can a building official accept documents for permitting that have been stamped by an architect who has not personally prepared the documents but has reviewed them?*

   Yes, but only if the architect has reviewed the documents in a manner consistent with the definition outlined in Question #2 above.

4. *May architects submit structural calculations for projects designed by others?*

   Yes, but only if the architect performed the calculations and is competent to perform them.

Engineer/Land Surveyor

5. *Can Washington State Registered engineers or land surveyors stamp documents not prepared by them or under their "direct supervision" after conducting a detailed review of those plans?*

   No. Under Washington law, RCW 18.43.070 and WAC 196-23-020(5), licensees can only place their stamp and signature on documents that were "prepared by" or "prepared under the direct supervision of" the licensee. A detailed review alone is not sufficient to qualify for direct supervision.

   If a review of a document is needed, the licensee can prepare a report that discusses the findings of the review with any supporting calculations and sketches, and then stamp the report. The report should refer to and/or be attached to the subject documents that were reviewed.

6. *Do "Shop Drawings" have to be stamped by a registered engineer?*

   Typically "Shop Drawings" are intended to represent manufacturer or fabricator details and are not part of the construction plans prepared by the engineer of record. However, "Shop Drawings" for bidder-designed elements such as truss designs and steel stairs, the manufacturer or fabricator shall have those "Shop Drawing" designs and supporting calculations prepared and stamped by a qualified professional engineer.

7. *If a design of an exempt structure (under 4,000 square feet) includes work that is considered engineering, can individuals other than professional engineers perform that design?*

   No. Even if a structure qualifies as exempt under Chapter 18.08 RCW, the provisions of Chapter 18.43 RCW require all engineering to be performed by or under the direct supervision of a professional engineer.

8. *May a licensed professional engineer, who is examined and qualified in Civil Engineering, lawfully perform structural engineering activities?*

   Yes. Licensed professional engineers may practice in disciplines of engineering that are different than their initial field of qualification, provided the engineers limit practice only to those areas where experience and skill have been obtained, to ensure that the work performed is consistent with safeguarding public health, safety and welfare. Local codes may require specialty licensing in structural engineering. Questions on how this is applied and interpreted should be directed to the Board of Registration for Professional Engineers and Land Surveyors.

9. *May a licensed professional engineer who has experience and skill in structural engineering activity, but has not passed the qualifying examination to be licensed in Structural Engineering, represent to the public that he or she is a Structural Engineer?*

   No. An engineer can only use the branch designation that corresponds to the qualifying examination passed.

Architect/Engineer/Landscape Architect

10. *Can an owner or builder or contractor make changes to an architect's, engineer's, or landscape architect's stamped documents?*

    No. When plans are stamped by a Washington state registered professional, changes must be approved by that professional or another registered professional who then assumes responsibility for the plans.

11. *May Washington State-registered engineers and landscape architects practice architecture in Washington?*

    No. They cannot represent themselves as "architects" or their work as "architecture" unless they have obtained an architect's license.

12. *May Washington State-registered architects or engineers file drawings prepared by them with public authorities for*

an exempt structure such as a residence or a structure of less than 4,000 square feet without their professional stamp and signature?

No. Regardless of whether the structure is exempt or non-exempt, Washington State-registered architects and engineers must stamp and sign all drawings prepared by them when filed with public authorities. [RCW 18.43.070, RCW 18.96.150, and RCW 18.08.370(2) as interpreted by AGO 1990 No. 9]

13. *May Washington State-registered architects prepare and stamp structural documents?*

    Yes, but architects cannot call these documents "engineering" drawings, or use the title structural engineer. Registered architects, while exempted from the conditions of chapter 18.43 RCW, may not represent themselves as engineers or their work as engineering.

14. *May a Washington State-registered professional make changes to filed plans prepared by another Washington registered professional?*

    Yes, but only in the following circumstances:

    a. The changes and all other related or affected portions of the structure must be shown on separate plan sheets that are stamped by the architect or engineer making the changes. The stamp on these change sheets means the professional is certifying that <u>all</u> portions of the structure related to or affected by the changes are shown on the change sheets even if some or even most of the affected work is not being changed itself.

       For example, if a new structural engineer were to change the size of the bolts in the structural steel framing system, but not change the size of the steel, change sheets showing the connection system as a whole – not just the bolt and hole – should be submitted. If the changes are only marked by hand on the original filed plans, then it will not be clear to the building official that the designer has properly

analyzed all of the related aspects of the change. Also, it is not practical to seal marked changes on the original-filed plans to fix responsibility for the changes.

b. The drawings as changed must meet all requirements of law.

15. *May anyone other than a licensed architect or engineer prepare and submit building permit documents to Washington State building officials?*

Yes. Washington State law, RCW 18.08.410, lists nine categories of design work that may be prepared by any person, subject to the State Building Code. These categories of "exempt" work allow any person to prepare plans, contract documents and provide project administration for:

a. Any residential structure of any size, up to and including four dwelling units, or a farm building, or an auxiliary building such as a garage, barn or shed;
b. A building of any occupancy up to 4,000 sq. ft.;
c. Any construction by a design-build licensed contracting firm, if the structural design services are performed by a registered engineer; and
d. Any other structure of any size or type, if a registered engineer or architect stamps the plans.

16. *Do pre-engineered structures need to be stamped by an appropriate licensed architect or engineer when submitted to the building official for approval?*

Pre-engineered structures such as "manufactured" buildings are treated no differently than other buildings. The plans for non-exempt structures must be prepared and stamped by an appropriate design professional registered in Washington. Examples of such structures are prefabricated metal buildings, roof truss systems, post-tension or pre-stress designs, and pre-cast concrete building components.

17. *Who may issue change orders and addenda to building permit construction documents that have been filed for non-exempt structures?*

    All changes to approved construction documents filed with the building official for non-exempt structures must be stamped by the registered architect or engineer responsible for the modifications.

18. *An owner wants to add 550 square feet to a 3,600-square-foot restaurant. Do the plans for the addition require an architect's or engineer's stamp?*

    Yes. The addition will add enough area to the building that the aggregate total area will exceed 4,000 square feet, thereby making the building a non-exempt structure as specified in RCW 18.08.410(6).

19. *Two doctors' offices of 1,500 square feet each are in separate structures on the same site and joined by a common roof. A third 1,500-square-foot office is proposed that joins the other two by a common roof, but with separation between buildings as in the original two offices. Must an architect or engineer stamp the new drawings?*

    Yes. The aggregate structure will be 4,500 square feet, which puts the complex into a non-exempt status as specified in RCW 18.08.410(6).

On-Site Wastewater Treatment System Designer

20. *To what extent is an on-site wastewater designer allowed to perform topographic mapping?*

    A licensed designer may perform topographic mapping of only those portions of a building site that will encompass the location of the wastewater system installation and its reserve area.

21. *Is an on-site designer permitted to survey boundaries and mark corners of the property where an on-site wastewater system is being proposed?*

    No. A designer is not permitted to perform any boundary surveys. A designer may use survey records to recover

existing survey monuments but, if monuments are missing, a licensed land surveyor must perform a boundary location determination.

22. *An individual is having a new home constructed in a rural area and it requires a septic system. Can the owner occupy the home when the construction of the system is completed?*

    The local health department that issued the permit decides when a system installation is complete. In most cases, they will not grant final approval for occupancy until all inspections and as-built records have been submitted to their office. Homeowners should confirm what the local requirements are to determine whether they can occupy the structure.

23. *If a site that is proposed for an on-site wastewater treatment/disposal system is known to have high ground water conditions, who should be consulted to determine whether the ground water conditions will affect the suitability for an on-site system?*

    While geologists may be qualified to evaluate the conditions of the ground water and its effect on the development of the site, only an on-site designer or professional engineer may perform a design of an on-site system to determine whether, and to what extent, such conditions will impact an on-site wastewater treatment/ disposal system.

Geologist

24. *When is a licensed geologist's stamp required on a document?*

    The law requires that any geologic work completed as a professional service "to others" be certified. The law further requires that anyone providing professional services to the public as an engineering geologist or hydrogeologist must certify his or her reports and other products with the appropriate specialty stamp.

25. *May a licensed geologist without a specialty provide planning, design, construction and remediation-related services?*

    Planning, design, construction and remediation-related services should be provided by those who are qualified to provide such services. The specialties of engineering geology and hydrogeology were established under state law to provide the public with a means of identifying professionals who have the knowledge, skills and abilities to provide services in those specific areas. Only geologists with a specialty license should be consulted for these types of services.

26. *What is the difference between a licensed engineering geologist and a licensed civil (geotechnical) engineer?*

    An engineering geologist is an earth scientist who has specialized in the application of geologic principles to civil works. A geotechnical engineer is a civil engineer who has specialized in the design and construction aspects of earth materials.

    Both professions share much of the same knowledge, skills and abilities. Each field, however, has particular strengths. Engineering geologists typically have greater skills in characterizing geologic conditions and processes, and in evaluating how processes will be affected or will affect a specific development activity. Geotechnical engineers will typically have greater skill in developing site-specific geotechnical designs, recommendations and criteria.

Non-licensed Professionals

27. *May a non-licensed person submit construction documents and receive a building permit for a five-plex (residential), when the total area is less than 4,000 square feet?*

A: No, unless the plans are stamped by a registered engineer or architect. A five-plex is a non-exempt structure, regardless of the area. Residential structures are exempt from the 4,000-square-foot limitation, but are limited to four dwelling units. An exempt four-plex may exceed the 4,000-square-foot limitation.

12 Nonlicensed Design And Building Professionals and Others

In addition to licensed design professionals, any individual may submit plans or documents to local building officials for exempt structures. See RCW 18.08.410(1) through (9) for a list of individuals, as well as types of structures, that are exempt from the architect law.

Some non-licensed design-related professionals and others may be certified by their respective professional associations, and may have testing and educational requirements (e.g., building designers, interior designers, drafters, and landscape designers). These professionals are not regulated by the State. Local building officials should determine the completeness of the plans or other documents submitted on exempt structures, including whether the plans are in conformance with applicable building codes.

Appendix

Recommended Minimum Requirements To Apply For A Building Permit

All submitted construction documents must be of sufficient detail to show the entire project with emphasis on the following:

- Structural integrity
- Life safety
- Architectural barriers (ADA handicap compliance)
- Compliance with all codes having jurisdiction
- Scope of work
- Deferred Submittal Schedule

In general, the amount of detail required will vary, depending on the nature and complexity of the project. What follows are suggested minimum guidelines for the information that should be provided on the documents before the building official begins a plan check review:

Coversheet for construction documents:

1. Project identification
    a. Project address, legal description, location map, and real estate ID number (tax parcel number)
    b. All design professionals identified, including addresses and telephone numbers.
    c. Identification of the person who is responsible for project coordination. All communications should be directed through this individual.

2. Design criteria list:
    a. Occupancy group
    b. Type construction
    c. Seismic zone
    d. Square footage and /or allowable area
    e. Fire sprinkler requirements
    f. Height and number of stories

g. Occupant load
h. Land use zone
i. Parking requirements required/provided
j. Allowed soil-bearing pressure
k. Design loads (roof, floor, wind, codes, seismic zones and factors)
l. Material strengths
m. Soils report
n. Landscaping requirements

Construction documents shall include the following information, where applicable:

1. Site Plan
   a. Location of the new structure and any existing buildings or structures
   b. All property lines with dimensions
   c. All streets, easements and setbacks
   d. All water, sewer, hydrants, and electrical points of connection
   e. Proposed service routes
   f. Existing utilities.
   g. Required parking, drainage, and grading design.
   h. North arrow and drawing scale

2. Foundation Plan
   All foundations and footings, including sizes, locations, reinforcing, and imbedded anchorages such as anchor bolts, hold-downs, and post bases.

3. Landscape Plans
   a. Existing and proposed grades
   b. Underground and above ground utilities
   c. All existing structures to remain and all new structures
   d. All streets abutting the project site
   e. Plant materials with appropriate symbols and identifications keyed to planting schedule
   f. Planting details
   g. Planting schedule to include botanical and common names, sizes, and conditions of plants

4. Floor Plan
   a. All floors including basements

b. All rooms and their use
c. Overall dimensions and locations of all structural elements and openings
d. All doors and windows
e. Door, window, and hardware schedules
f. All fire assemblies, area and occupancy separations and draft stops
g. Smoke and heat detectors

5. Framing Plans and Roof Framing Plans
   All structural members, their size, methods of attachment, location and materials, roof drainage and location of roof-mounted equipment.

6. Exterior Elevations
   a. All views
   b. All openings
   c. All lateral bracing systems where applicable

7. Building Sections and Wall Sections
   a. All materials of construction
   b. All non-rated and fire-rated assemblies and fire rated penetrations
   c. All vertical dimensions

8. Interior Elevations
   a. All ADA required equipment installations with vertical height clearances shown
   b. Relights, sill heights, elevator operation panels, etc., which are subject to code requirements

9. Mechanical System
   a. Entire mechanical system
   b. All units, their sizes, mounting details, all duct work and duct sizes
   c. All fire dampers where required
   d. Equipment schedules
   e. Energy conservation calculations per State of Washington
   f. Indoor air quality standards including radon mitigation systems
   g. Fire protection systems

10. Plumbing System
    a. All fixtures, piping, slopes, materials and sizes
    b. Connection points to utilities, septic tanks, pretreatment sewer systems and water wells

11. Electrical System
    a. All electrical fixtures (interior, exterior and site)
    b. Wiring sizes and circuiting
    c. Grounding, panel schedules, single line diagrams
    d. Load calculations
    e. Fixture schedules
    f. Connection to utility
    g. Fire alarm systems
    h. Power use budget

12. Structural Calculations
    Where required, provide for project's entire structural system

13. Specifications
    a. Provide either on the drawings or in booklet form
    b. Further define construction components, covering:
    c. Construction components, including materials and methods of construction
    d. Wall finishes
    e. Pertinent equipment
    f. Schedules (may be incorporated in project manual in lieu of drawings)
    g. Planting requirements

14. Addenda and Changes
    It shall be the responsibility of the individual identified on the cover sheet as the principal design professional to notify the building official of any and all changes throughout the project and provide revised plans, calculations, or other appropriate documents prior to actual construction.

15. Revisions
    For clarity, all revisions should be identified with a Delta "△" symbol, should be clouded on the drawings or resubmitted as a new set of plans, and should identify the engineer or architect of record.